WHAT IS CLAIMED IS:

- An X-ray detector, comprising:

 an X-ray converter, adapted to convert X-ray radiation to light;
 a photodiode sensor, including least two photodiode elements, adapted to

 detect light produced by the X-ray radiation conversion in the X-ray converter; and

 a nonlinearly absorbent filter, arranged between the X-ray converter and the

 photodiode sensor.
- 2. The X-ray detector as claimed in claim 1, wherein the filter is at least partially composed of photochromic material.
- 3. The X-ray detector as claimed in claim 1, wherein the filter is at least partially composed of at least one of phototropic glass and plastic.
- 4. The X-ray detector as claimed in claim 3, wherein the filter includes fiber optics composed of at least one of phototropic glass and plastic.
- 5. The X-ray detector as claimed in claim 4, wherein the photodiode sensor is at least partially composed of amorphous semiconductor materials.
- 6. The X-ray detector as claimed in claim 5, wherein the photodiode sensor is at least partially composed of at least one of amorphous silicon and of an amorphous silicon alloy.
- 7. An X-ray device including an X-ray detector as claimed in claim 1.
- 8. A method for detection of X-ray radiation, comprising: converting X-ray radiation to light; filtering the light through a nonlinearly absorbent filter; and detecting the light, produced by the converted X-ray radiation and filtered through the nonlinearly absorbent filter, by a photodiode sensor including photodiode elements.

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- 9. The method as claimed in claim 8, wherein photochromic material is used for filtering.
- 10. The method as claimed in claim 8, wherein at least one of phototropic glass and plastic is used for filtering.
- 11. The method as claimed in claim 10, wherein the light is filtered through fiber optics composed of at least one of phototropic glass and plastic.
- 12. The method as claimed in claim 9, wherein at least one of phototropic glass and plastic is used for filtering.
- 13. The method as claimed in claim 8, wherein the light is filtered through fiber optics composed of at least one of phototropic glass and plastic.
- 14. The X-ray detector as claimed in claim 2, wherein the filter is at least partially composed of at least one of phototropic glass and plastic.
- 15. The X-ray detector as claimed in claim 14, wherein the filter includes fiber optics composed of at least one of phototropic glass and plastic.
- 16. The X-ray detector as claimed in claim 1, wherein the photodiode sensor is at least partially composed of amorphous semiconductor materials.
- 17. The X-ray detector as claimed in claim 1, wherein the photodiode sensor is at least partially composed of at least one of amorphous silicon and of an amorphous silicon alloy.
- 18. An apparatus for detection of X-ray radiation, comprising: means for converting X-ray radiation to light; means for filtering the light through a nonlinearly absorbent filter; and

means, including photodiode elements, for detecting the light filtered through the nonlinearly absorbent filter.

- 19. The apparatus as claimed in claim 18, wherein the means for filtering is at least partially composed of photochromic material.
- 20. The apparatus as claimed in claim 18, wherein the means for filtering is at least partially composed of at least one of phototropic glass and plastic.
- 21. The apparatus as claimed in claim 18, wherein the means for filtering includes fiber optics composed of at least one of phototropic glass and plastic.
- 22. The apparatus as claimed in claim 18, wherein the sensing means is at least partially composed of amorphous semiconductor materials.
- 23. The apparatus as claimed in claim 18, wherein the sensing means is at least partially composed of at least one of amorphous silicon and of an amorphous silicon alloy.
- 24. An X-ray device including an apparatus as claimed in claim 18.
- 25. An X-ray detector, comprising:

X-ray converter means for converting X-ray radiation to light; sensing means, including least two photodiode elements, for detecting light produced by the X-ray radiation conversion in the X-ray converter; and

means for filtering the light, including a nonlinearly absorbent filter arranged between the X-ray converter means and the sensing.

- 26. The X-ray detector as claimed in claim 25, wherein the means for filtering is at least partially composed of photochromic material.
- 27. The X-ray detector as claimed in claim 25, wherein the means for filtering is at least partially composed of at least one of phototropic glass and plastic.

- 28. The X-ray detector as claimed in claim 25, wherein the means for filtering includes fiber optics composed of at least one of phototropic glass and plastic.
- 29. The X-ray detector as claimed in claim 25, wherein the sensing means is at least partially composed of amorphous semiconductor materials.
- 30. The X-ray detector as claimed in claim 25, wherein the sensing means is at least partially composed of at least one of amorphous silicon and of an amorphous silicon alloy.
- 31. An X-ray device including an X-ray detector as claimed in claim 25.